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CORNING CABLE SYSTEMS LLC			KANG, JULIANA K	
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HICKORY, NC 28603			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

1. Applicant's communication filed on August 16, 2005 has been carefully studied by the Examiner. The arguments advanced therein are persuasive for some claims but not persuasive for other claims. Also new interpretation of the claim language "in communication with" necessitated new rejections set forth here below. This action is not made final.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 7-9, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Barnett et al (U.S. Patent 4,846,566).**

Barnett et al disclose a fiber optic cable (1) comprising: a strength member comprising a sheet (2), said sheet having at least one fiber access opening leading to at least one formed area (decoupling zone, U-shaped with a generally flat bottom portion compartment 3) disposed generally longitudinally relative to an axis of the cable; at least one optical fiber component disposed within said at least one formed area so that the at least one optical fiber component (7) can be accessed at the fiber access opening without substantially disturbing the strength member; and a cable jacket (9) generally

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surrounding said strength member with at least a portion of the cable jacket being in communication with the at least one fiber access opening (see Fig. 2). Please note that the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, "said sheet manufactured in a forming process" has not been given patentable weight. Even though Barnett et al refer the element shown in Fig. 2 as an optical fiber element. It clearly shows all the claimed limitations of optical cable thus, the element shown in Fig. 2 of Barnett et al is considered as an optical cable.

Barnett et al disclose the strip of strength member having a substantially uniform thickness (see Fig. 2).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-12, 14-15, 32-39, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rasanen et al (U.S. Patent 5,319,730).**

Rasanen et al disclose a fiber optic cable (8) comprising: a strength member comprising a sheet (7c), said sheet having at least one fiber access opening leading to at least one formed area (2c) disposed generally longitudinally relative to an axis of the cable; at least one optical fiber component (3) disposed within said at least one formed

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area so that the at least one optical fiber component (12) can be accessed at the fiber access opening without substantially disturbing the strength member; and a cable jacket (1) generally surrounding said strength member with at least a portion of the cable jacket being in communication with the at least one fiber access opening (see Fig. 3).

However, Rasanen et al do not teach a portion of the cable jacket being in communication with the at least one fiber access opening wherein the term "in communication" is now interpreted as that the fiber access opening exposed to the cable jacket (see page 10 of remarks submitted August 16, 2005). As applicant pointed out Fig. 3 of Rasanen et al show a tape disposed between the cable jacket and the reinforcing member 7c. However, the rest of the drawings do not use a tape. It would have been obvious to one having ordinary skill in the art at the time the invention was made to omit the tape shown in Fig. 3, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same functions as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184. Also Rasanen et al teach accessing the fiber (see column 4 line 6-16) by stripping the cable jacket and omitting the tape would make the fiber access easier. Rasanen et al teach that the strength member comprises a metallic material (see column 4 line 19).

Regarding claims 6 and 29, as described above Rasanen et al teach the claimed invention including a U-shaped formed area but is silent about a V-shaped formed area. Using V-shape in place of U-shape in the art is well known.

Regarding claims 32, 33, 36-39, as described above, Rasanen et al disclose the claimed optical fiber cable except the strain values of the cable for different tensile

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forces. Rasanen et al teach the strength member made of metal. Thus, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Rasanen et al's strength member to obtain any desired strain values including the applicant's claimed strain values, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Generally, optimum range will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such range is critical.

Regarding claims 12 and 42, as described above, Rasanen et al teach the claimed invention. However, Rasanen et al do not explicitly teach a central electrical conductor surrounded by a dielectric material. Rasanen et al teach that using electrical conductors (see column 3 lines 42-52). Thus, even though Rasanen et al do not positively teach an electrical conductor placed in the formed area, it would have been obvious to one with ordinary skill in the art to use an electrical conductor, and to place the electrical conductor in the formed area to provide extra protection for the electrical conductor by placing them inside the strength member. Use of a dielectric material would have been also obvious to provide the insulation for the electrical conductor from the metal strength member.

Regarding claims 4, 5, 34 and 35, as described above Rasanen et al teach the claimed invention except the strength member having a non-preferential bend or preferential bend characteristic. Since applicant does not provide the criticality of having either a non-preferential bend or preferential bend characteristic it would have

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been obvious to one having ordinary skill in the art at the time the invention was made to use either one of bend characteristics in Rasanen et al.

6. Claims 1-3, 6, 7, 9, 11, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gladenbeck et al (U.S. Patent 4,863,234).

Bladenbeck et al disclose the protective sheath for optical waveguide splice comprising a strength member comprising a sheet (6) made of metal, the sheet having at least one fiber access opening leading to at least one formed area (decoupling zone, U-shaped with a generally flat bottom portion compartment) disposed generally longitudinally relative to an axis of the optical waveguide; at least one optical fiber component disposed within said at least one formed area so that the at least one optical fiber component (1) can be accessed at the fiber access opening without substantially disturbing the strength member; and an outer jacket (5) generally surrounding said strength member with at least a portion of the outer jacket in communication with the at least one fiber access opening (see Fig. 3). Gladenbeck et al's fiber can be access accessed through the upper side of U-shaped or V-shaped strength member (support, 6) without substantially disturbing the strength member by reheating. Please note that the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, "said sheet manufactured in a forming process" has not been given patentable weight. As described above, Gladenbeck et al teach all the claimed limitations except an optical fiber cable. Applying protective sheath for an optical fiber cable is well known in the art to protect the fiber from outside environment thus,

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applying teaching of sheathing structure of Gladenbeck et al into an optical fiber cable would have been obvious to one having ordinary skill in the art at the time the invention was made to protect optical fibers.

7. Claims 10 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rasanen et al and further in view of Fitz et al (U.S. Patent 6,137,936).

As described above, Rasanen et al disclose the claimed optical cable except indicia. Fitz et al teach an optical fiber cable with a jacket including indicia to make the position of the strength member readily apparent from the external of the cable. Fitz et al further teach that the indicia, preferably, is a ridge or groove on or in a portion of the jacket surface. Thus it would have been obvious to one with ordinary skill in the art at the time the invention was made to use indicia in Rasanen et al as taught by Fitz et al to mark the cable elements that are embedded in the cable for easier recognition when it is desired to expose the optical cable elements.

8. Claims 6, 32, 33, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnett et al.

Regarding claim 6, as described above Barnett et al disclose the claimed invention including a U-shaped formed area but is silent about a V-shaped formed area. Using V-shape in place of U-shape in the art is well known

Regarding claim 32, 33, 36-39, as described above Barnett et al disclose the claimed invention except the cable having a strain of about a 1.0% or less when

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applying about a 1,000 lb. tensile force. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cable to have a strain of about a 1.0% or less when applying about a 1,000 lb. tensile force in Barnett to provide a robust cable and it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

9. Claims 16 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnett et al and further in view of Consonni (U.S. Patent 6,137,934).

As described above Barnett et al disclose the claimed invention except a water-blocking component disposed in the formed area. Consonni teaches an optical cable having a water-blocking component disposed in a formed area to protect optical fibers from water damage. Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a water-blocking component in Barnett et al as taught by Consonni to protect the fiber from water damage.

10. Claims 16 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rasanen et al and further in view of Consonni (U.S. Patent 6,137,934).

As described above Rasanen et al disclose the claimed invention except a water-blocking component disposed in the formed area. Consonni teaches an optical cable having a water-blocking component disposed in a formed area to protect optical fibers from water damage. Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a water-blocking component in Rasanen et al as taught by Consonni to protect the fiber from water damage.

Allowable Subject Matter

11. Claims 17-27 and 29-31 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: there is no prior art made of record that teaches or reasonably suggest the claimed optical cable comprising all the specific elements and the specific combination including an interfacial layer disposed between an outer surface of a strength member and a cable jacket and have at least a portion of the cable jacket being in communication with (exposed to) a fiber access opening as set forth in claim 17.

12. Claims 13 and 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sutehall et al (U.S. Patent 5,082,380) teach an optical fiber cable with a fiber access opening. Anjan et al (U.S. Patent 5,263,104) teach U-shaped optical fiber protective housing. Houghton (Re 34,516) teaches an optical fiber cable with a fiber access opening. Katurashima et al (U.S. Patent 5,233,678) teach an optical fiber cable having a plurality of multifiber units and a single unit (see Fig. 2). Nonomura et al (JP 2000-214361) teach an optical fiber cable having U-shaped molded block.

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (571) 272-2348. The examiner can normally be reached on Mon. & Fri. 10:00-6:00 and Tue. & Thur. 10:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JULIANA KANG
PRIMARY EXAMINER



10/31/05